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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,530	07/29/2003	Ralf Naumann	P7111.4US	1529

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WUPPERTAL, 42289  
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EXAMINER
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LOPEZ, FRANK D

ART UNIT	PAPER NUMBER
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3745

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/604,530

Applicant(s)

NAUMANN ET AL.

Examiner

F. Daniel Lopez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on August 12, 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-7 and 9-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-7 and 9-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                         |                                                                             |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                                |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____                                                             | 6) <input type="checkbox"/> Other: _____                                    |

***Response to Amendment***

Applicant's arguments filed August 12, 2005, have been fully considered but they are not deemed to be persuasive.

Applicant's arguments with respect to claims 3-6, 9 and 12-14 have been considered but are deemed to be moot in view of the new grounds of rejection. The new grounds of rejection are necessitated by adding the limitations of claim 8 to the independent claim, thereby adding it to all the dependent claims.

Applicant argues that the rejection using Peo et al is no longer applicable, since the widened section at the end face is not 1.5 to 3 times the width of the radially inwardly positioned section of the rotor vane; but does not substantiate why this is so. Peo et al shows the end face having three portions: a middle portion, the same width as the radially inwardly positioned section, and two outer circumferentially extending portions, extending in opposite directions from the middle portion. Since the width of the middle portion is the same as the radially inwardly positioned section, and the outer circumferentially extending portions are equal to each other; each outer circumferentially extending portion must have a width equal to  $\frac{1}{4}$  the width of the radially inwardly positioned section for the end face to have a width 1.5 times the width of the radially inwardly positioned section. Since the drawing indicates that this is true, Peo et al meets the limitations of claim 1.

Applicant argues that the rejection using Folland et al is no longer applicable, since claim 8 has been added to claim 1 and Folland et al was not used to reject claim 8. Applicant is mistaken. Claim 8 depended from claim 6. Part of claim 6 and claim 8 was added to claim 1. The part of claim 6 that was not added to claim 1 is the limitation that prevented Folland et al from meeting the limitations of claim 6 and 8. Therefore, Folland et al is still applicable to reject claim 1.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 102***

Claims 1, 4-7, 10, 11 15 and 16 are rejected under 35 U.S.C. § 102(b) as being anticipated by Peo et al. Peo et al discloses an oscillating motor comprising a rotor (17) with rotor vanes (18) rotatable relative to a stator (10) with stator vanes (16); wherein the rotor vanes include a widened section tapered radially inwardly from an end face to recesses between the widened section and a constant width section (short section adjacent the rotor hub 17).

Claims 1 and 3-5 are rejected under 35 U.S.C. § 102(b) as being anticipated by Folland et al. Folland et al discloses an oscillating motor comprising a rotor with rotor vanes (34) rotatable relative to a stator (20) with stator vanes (radially inwardly tapering side walls); wherein the rotor vanes include a widened section tapered (at 50) radially inwardly from an end face to recesses (formed adjacent 34F).

***Claim Rejections - 35 USC § 103***

Claims 1, 3-6 and 12-14 are rejected under 35 U.S.C. § 103 as being unpatentable over Ludwig et al in view of Peo et al. Ludwig et al discloses an oscillating motor comprising a rotor (22) with a rotor vane (35) rotatable relative to a stator (15) with a stator vane (23); wherein the rotor vane include a widened section tapered discontinuously radially inwardly from an end face to a radially inwardly positioned section, connecting the widened section to a base member; and the stator vane has two recesses (on either side of abutment, shown abutting rotor vane in fig 1), with the widened section engaging a second outer recess of the recesses (i.e. the widened section is within the second recess); but does not disclose that the rotor has rotor vanes and the stator has stator vanes; or that an end face of the widened section has a width that is 1.5 to 3 times the width of the radially inwardly positioned section.

The width of the end face relative to the width of the radially inwardly positioned section is dependent on the radius of the rotor vane, the angle of a surface connecting the end face to the radially inwardly positioned section relative to a radius extending from a center of the rotor, and the width of the radially inwardly positioned section. One having ordinary skill in the oscillating art would recognize that a particular sized rotor

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would have a width of the end face 1.5 to 3 times the width of the radially inwardly positioned section. Therefore, it would have been obvious at the time the invention was made to one having ordinary skill in the art to make the width of the end face of Ludwig et al 1.5 to 3 times the width of the radially inwardly positioned section, for the purpose of having a particular sized motor.

Note that Ludwig et al discloses the problem (column 4 line 55-60) that applicant is trying to overcome, but overcomes it with a different solution (seal 40). Furthermore, Ludwig et al discloses a different reason for having a wide end face, namely to cushion the rotor as it approaches its end position (e.g. column 4 line 30-39).

Peo et al teaches, for a an oscillating motor comprising a rotor (17) with a rotor vane (18) rotatable relative to a stator (10) with a stator vane (16); wherein the rotor vane include a widened section tapered radially inwardly from an end face to recesses between the widened section and a constant width section (short section adjacent the rotor hub 17); that the rotor has rotor vanes and the stator has stator vanes.

Since an oscillating motor having a single vane and having two vanes is functionally equivalent in the oscillating motor art, as shown by Ludwig et al and Peo et al, it would have been obvious at the time the invention was made to one having ordinary skill in the art to make the rotor of Ludwig et al with has rotor vanes and the stator with stator vanes, as taught by Peo et al, as a matter of engineering expediency.

Claim 9 is rejected under 35 U.S.C. § 103 as being unpatentable over Peo et al. Peo et al discloses an oscillating motor comprising rotors (18, 18') with rotor vanes rotatable relative to a stator (10) with a stator vane (51); wherein the rotor vane include a widened section tapered discontinuously radially inwardly from an end face to a radially inwardly positioned section, connecting the widened section to a base member; but does not disclose that lateral surfaces of the widened section pass arc-shaped into lateral surfaces of the radially inwardly positioned section.

There are many ways to make the rotor of Peo et al. One way is to machine it with a rounded cutter. If it is machined with a rounded cutter, the discontinuity between the widened section and the radially inwardly positioned section will have an arc. There

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appears to be no reason to make the discontinuity arc-shaped for reasons related to the fluid flow. Although discontinuities are usually made arc-shaped for decreasing stress concentrations, this area of the rotor does not appear to have large stress concentrations, therefore stress concentrations do not appear to be the reason for the arc-shape.

Therefore, it would have been obvious at the time the invention was made to one having ordinary skill in the art to make the rotor of Peo et al with a rounded cutter, thereby making the discontinuity arc-shaped (i.e. the lateral surfaces of the widened section pass arc-shaped into lateral surfaces of the radially inwardly positioned section) as a matter of engineering expediency.

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Lopez whose telephone number is 571-272-4821. The examiner can normally be reached on Monday-Thursday from 6:15 AM -3:45 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Look, can be reached on 571-272-4820. The fax number for this group is 571-273-8300. Any inquiry of a general nature should be directed to the Help Desk, whose telephone number is 1-800-PTO-9199.



F. Daniel Lopez  
Primary Examiner  
Art Unit 3745  
October 31, 2005